TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Water Resources

Memphis Environmental Field Office, 8383 Wolf Lake Drive, Bartlett, TN 38133

1-888-891-8332 (TDEC)

Compliance Inspection for Ready Mix Concrete Facilities General NPDES Permit

---

Facility Name: West Tennessee Ready Mix - Frayser Plant	**NPDES Tracking Number**: TNG110370
Permit Effective Date: February 14, 2013	**Permit Expiration Date:** October 31, 2017
Date and Time of Inspection: 09/26/2016 15:45 pm	**Inspector Name: Cliff Caudle (DWR)**

Official Contact Person Name: Scott Craft (Area Manager) and Thomas Gross (Batch Plant Manager)	
Address: 2940 Frayser Boulevard Memphis, TN 38127	**Phone Number:** (662) 393-7676
	Email: scraft@mmcmaterials.com

Observations and Comments

On September 26, 2016, Mr. Cliff Caudle (with the Tennessee Department of Environment and Conservation, Division of Water Resources, Memphis Environmental Field Office (TDEC/DWR/MEFO) met with Mr. Thomas Gross, batch plant operator, at the MMC-Frayser Plant, located at 2940 Frayser Boulevard in Memphis, Tennessee to review the facility's monitoring records and to discuss the facility's self-monitoring program. Mr. Gross's assistance during the inspection was greatly appreciated. In addition, the assistance of Mr. Byron Wegmann of MMC in answering questions about the Frayser Plant and in providing requested facility documentation via email after the inspection was also greatly appreciated. The following is a summary of Mr. Caudle's findings and observations during and after the inspection.

The MMC - Frayser Plant (Frayser Plant) is covered under the General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Storm Water Runoff and Process Wastewater Associated with Ready Mixed Concrete Facilities (TNG110000 – the "RMCP") and has been assigned the tracking number TNG110370. Coverage under the RMCP authorizes the facility to discharge process water via Outfall 001, and storm water via Outfall SW1, to an unnamed tributary which ultimately discharges to the Loosahatchie River. Coverage under the RMCP was issued on February 14, 2013, and coverage expires on October 31, 2017.

At the time of the inspection, the MMC - Frayser Plant was being operated by West Tennessee Ready Mix, LLC, under MMC's RMCP coverage. Mr. Gross stated that MMC Materials, Inc. and West Tennessee Ready Mix are sister companies.

I. Records/Reports

The RMCP requires permittees to maintain copies of all pertinent facility documentation for their records, but does not require the documentation to be maintained at each plant. No documentation was available for review on-site at the Frayser Plant at the time of the inspection. On October 17, 2016, Mr. Caudle requested, the following reports/documents from Mr. Byron Wegmann of MMC via email. Mr. Wegmann provided the documents via email on October 18, 2016.

- ✓ Storm Water Pollution Prevention Plan (SWPPP) revised on September 29, 2011;
- ✓ Process Water DMRs for the July 2016 through June 2016 monitoring period;
- ✓ Storm Water DMRS for the 2013 through 2016 monitoring period, and their corresponding laboratory analytical results and chains of custody;
- ✓ pH meter calibration records (provided on October 31, 2016 via email).

The following reports/documents were requested via email on October 17, 2016, but were not provided to the Division.

- o Copies of monthly inspections of designated equipment areas. It is not known if the monthly inspections were performed and/or documented appropriately. Please note that Section 7.3.4 of the NPDES permit requires inspections to be conducted monthly, at a minimum.
- o Copies of annual comprehensive site evaluations. It is not known if the annual evaluations were performed and/or documented appropriately. Please note that Section 7.7 of the NPDES permit requires that the evaluations be conducted yearly, at a minimum.

Mr. Wegmann stated via email that MMC prepares and submits the facility's discharge monitoring reports (DMRs), and maintains copies of the DMRs, COCs, Laboratory analytical results, pH calibrations, and flow measurements at their corporate office in Horn Lake, Mississippi. Mr. Wegmann stated that the Storm Water Pollution Prevention Plan (SWPPP) and facility layout plan are kept by West Tennessee Ready Mix at their Jackson, Tennessee corporate office.

Process Water DMRs for the July 2013 through June 2016 reporting period were marked "no discharge" for all monitoring events. Consequently, no flow measurements were taken. Storm Water DMRs for the 2013, 2014, and 2015 annual monitoring events indicated no exceedances on any parameters.

II. Facility Site Review

The Frayser Plant occupies approximately 6.2 acres at the southern end of the overall 42.58 acres owned by MMC Materials, Inc. at this location (Figure 2). According to the facility SWPPP, the MMC Ready Mix - Frayser Plant (also called the "batch plant") consists of a batch house and a ready-mix concrete plant (Figure 1 and Photo 1). Cement is stored in an enclosed silo and emptied directly into the mixer trucks. Sand, gravel, and limestone are stored in open stockpiles west, north, and east of the batch plant.

The facility utilizes a five-stage, concrete treatment basin system, located on the west side of the batch plant, for process water flow from the batching/operations area (Photos 2, 3, and 4). The truck washing/washout station is located to the south of the treatment basins (Photo 2). Truck washout also occurs on the north side of the treatment basins (Photo 3). All drainage from truck washing activities flows to the settling basin system. Whenever possible, water from the treatment basins is recycled into the batching process. Under normal operations, process water that may discharge from the treatment basin system collects on-site in a catchment area west of the basins (the "western catchment"), where it appears to infiltrate or evaporate without discharging. The water discharging from the basin system to the western catchment was clear at the time of the inspection (Photo 5).

Outfall 001, as designated by MMC, is located immediately down-gradient and west of the western catchment area, near the western midpoint of the batch plant (Figure 1), but is not an off-site discharge point. If there were to be a process water discharge from Outfall 001, the water leaving the outfall would discharge to an on-site diversion ditch (the "diversion ditch") which conveys the water northward along the west side, then eastward across the north side of the batch plant (Figure 1). The diversion ditch gradually flattens as it crosses the north side of the batch plant, allowing any remaining water that doesn't infiltrate or evaporate to sheet flow eastward and collect along the east side of the larger MMC parcel in another catchment area (hereafter called the "eastern catchment"), northeast of the batch plant (Figure 1).

The eastern catchment also receives process water from the watering of aggregate stockpiles along the east side of the batch plant (Photo 7). If the discharge is sufficient, the water will leave the eastern catchment and exit MMC's property at the eastern boundary, which is the ultimate off-site discharge point for all process water from the Frayser Plant. However, there is no designated process water outfall, and consequently no monitoring of process water, for this portion of the site. A process water outfall should be designated at this location.

Water that discharges off-site at this location flows onto the Illinois Central Railroad right-of-way, then northward toward the unnamed tributary of Loosahatchie River (Figure 2). No evidence of impacts down-gradient from the discharge point was observed. As noted in Part 1 of the CEI report, "No Discharge" was reported on all DMRs for Outfall 001 during the July 2013 through June 2016 monitoring period, possibly because flow was insufficient to cause off-site discharge.

Storm water that falls on the southeastern portion of the Frayser Plant, which includes the diesel tanks and aggregate stockpiles east of the batch house, flows southeastward to a drainage ditch and then off-site. There is currently no designated storm water outfall and no monitoring of storm water from this portion of the site. A storm water outfall should be designated and storm water monitored at this location in accordance with Section 5.2 of the RMCP.

The facility also stockpiles waste concrete from truck washouts and from cleaning out the treatment basins (Photo 8). Periodically, MMC/West Tennessee crushes the waste concrete and stockpiles it for re-sale as a compactible fill/base material. The waste concrete and crushed concrete stockpiles are located north of the concrete batch plant on the northern and northeastern portions of the overall 42.58-acre parcel of which the batch plant is a part. The waste and crushed concrete stockpiles are not included in the permitted area for TNG110370. The area of the waste concrete stockpiles appeared to drain to the parcel interior, but the southern portions of the stockpile area may discharge to the above-mentioned outfall area on the east side of the site. Based on the above items, the SWPPP and site map should be updated to reflect a more accurate configuration for the facility operations area and outfalls. In addition, MMC should notify the Division's Nashville Central Office in writing of the changes to the site and the SWPPP modifications.

III. Effluent/Receiving Waters

At the time of the inspection, process water was observed discharging from the multi-basin treatment system (Photos 4 and 5) to the western catchment above Outfall 001 (Photo 6). However, process water was not observed discharging to the diversion ditch via designated Outfall 001, and was not observed discharging off-site. The water discharging from the basins appeared clear (Photo 5).

In addition, mostly clear process water was observed discharging northeastward toward the eastern low area from the manual watering of aggregate stockpiles along the east side of the batch plant. The process water was pooling and infiltrating on-site and was not observed discharging off-site at the eastern discharge point or elsewhere.

Division personnel did not observe a sign designating process water discharges for Outfall 001. The Division recommends that an appropriate sign be placed on the site in an area clearly visible to the public as required under Section 8.16 of the NPDES permit.

IV. Flow Measurement

Mr. Wegmann of MMC is responsible for conducting flow measurement for process water monitoring. Process water DMRs for the July 2013 – June 2016 reporting period were marked "No Discharge," and therefore no flow measurement has been conducted during the reporting period.

V. Self-Compliance Program

Please refer to Section I of the CEI report regarding monthly inspection requirements, Section II regarding SWPPP modification/update, and Section III of the CEI report with regard to the specifications for, and placement of, the NPDES sign.

VI. Laboratory

Mr. Wegmann of MMC is responsible for conducting the facility's sample collection and is responsible for obtaining pH measurements at site outfalls. Regarding Storm Water samples, Mr. Wegmann

stated that the samples are collected directly into the containers provided by the laboratory, and are placed in a cooler of ice for transport to the laboratory. Analysis of the samples had been contracted to TEC Environmental Laboratories located at 2269 Dr. F.E. Wright Drive in Jackson, Tennessee. Chains of custody reviewed indicated that the temperature of the samples upon receipt at the laboratory was < 6° C, in accordance with test procedures approved under 40 CFR Part 136.

MMC uses a digital pH meter to obtain the pH of the samples immediately after sample collection. The pH meter is calibrated before each sampling event. Mr. Wegmann provided a log of pH calibrations via email to the MEFO on October 31, 2016. The log contains calibrations using pH buffer solutions 7.00 and 10.01, which are appropriate for the pH values encountered at the site, as recorded on the COCs at the time of sampling.

A review of submitted documentation revealed that TEC Environmental Laboratories' analytical methods for TSS and Fe are in accordance with methods approved in 40 CFR Part 136.

VII. Operations and Maintenance

The MMC Materials – Frayser Plant was in operation at the time of the inspection. Based on observations during the inspection, the facility appeared to be adequately maintaining areas exposed to storm water onsite. The five-stage treatment basin system set up to treat process water also appeared to be adequately maintained. According to Mr. Gross, the basin system is cleaned out as needed and the material stockpiled on-site until it is crushed for sale as fill material.

Two diesel Aboveground Storage Tanks (AST) with secondary containment (12,000 and 2,000 gals., resp.), operated by West Tennessee Ready-Mix, were located east of the batch plant and appeared to have been operated correctly with no evidence of spills or overfill. One transformer oil tank (300 gals.) was located east of the batch office. Containers of various concrete admixtures and truck washing products are kept on-site in closed, heavy plastic containers. The only potential exposure to storm water is during filling/transfer to the containers. No evidence of spills was observed at the time of the inspection. Figure 1 shows the location of the above-mentioned tanks and containers. Truck and heavy equipment maintenance and servicing are not performed at this facility.

VIII. Pollution Prevention

A copy of the facility's Storm Water Pollution Prevention Plan (SWPPP) dated September, 2011 and signed by Scott Craft on November 1, 2011, was provided via email by Mr. Wegmann upon request on October 18, 2016. However, no records of annual SWPPP review or updates to the SWPPP were provided. Please refer to Part 7 of the NPDES permit for further guidance. The Division recommends that the SWPPP be reviewed at least annually to ensure that the plan is accurate and current.

IX. Storm Water

At the time of the inspection, no discharge of storm water runoff was observed at SW1. Additionally, no visible oil sheen, color, or other observable pollutants were present at SW1 or other locations on the site.